

## CLAIMS

1. A method for producing an anode catalyst for a polymer electrolyte fuel cell, comprising:

5 a first supporting step of adhering at least one element selected from the group consisting of the elements of group 4, elements of group 5 and elements of group 6 of the periodic table to a conductive support, and subsequently conducting a heat treatment in a non-oxidizing atmosphere;  
10 and

a second supporting step of adhering platinum and ruthenium on the support obtained in the first supporting step, and subsequently conducting a heat treatment in a non-oxidizing atmosphere.

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2. The method according to Claim 1, wherein the heat-treatment temperature in each of the first and second supporting steps is from 200 to 600 °C.

20 3. An anode catalyst for a polymer electrolyte fuel cell, comprising, as catalytic metal components, platinum, ruthenium and at least one element selected from the group consisting of the elements of group 4, elements of group 5 and elements of group 6 of the periodic table supported on a  
25 conductive support as obtained by the method according to Claim 1.

4. An anode catalyst for a polymer electrolyte fuel cell, comprising, as catalytic metal components, platinum,  
30 ruthenium and at least one element selected from the group consisting of the elements of group 4, elements of group 5 and elements of group 6 of the periodic table supported on a conductive support, wherein the specific surface area of the catalytic metal components is 60 to 350 m<sup>2</sup>/g.

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5. A polymer electrolyte fuel cell comprising the anode catalyst according to Claim 3.

6. A polymer electrolyte fuel cell comprising the  
5 anode catalyst according to Claim 4.